

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action. Favorable reconsideration of the subject application is requested in view of the comments made herein.

By the present amendment, claims 1, 3-4, and 6-8 are amended. No new matter is believed entered.

Claims 4-8 were objected to as being in improper form. The present amendments to the claims remove all multiple dependencies. Accordingly, it is respectfully submitted that claims 4-8 are in condition for allowance, and withdrawal of the objection is requested.

Claim 1 was objected to because the Examiner alleged that the claim was “confusing” regarding the “aerodynamic skin” and the “rear skin.” Respectfully, the Examiner is in error. The “aerodynamic skin (18)” and the “rear skin (28)” of claim 1 are separate elements of the flap (16) that are coupled together, such as shown in the example embodiment of Figure 3. The “aerodynamic skin” is discussed at page 12, lines 22 *et seq.* of the original specification, while the “rear skin” is discussed at page 13, lines 23 *et seq.* of the original specification. Claim 1 was further objected to regarding the language “on the one hand,” which has now been removed. Similar changes are made to claim 4. Accordingly, it is respectfully submitted that claim 1 is in condition for allowance, and withdrawal of the objection is requested.

Claims 1-3 were rejected under 35 USC 103(a) over O’Neil in view of Cordier et al. and further in view of Carns. Respectfully, the rejections are traversed for the following reasons. Claim 1 states, in pertinent part, “a single rigid bird trajectory-deflecting wall (42) anchored ~~on the one hand~~ to the aerodynamic skin (18) and ~~on the other hand~~ to the rear skin (28).” Neither O’Neil nor Cordier et al. nor Carns, either alone or in combination, disclose or suggest such structure.

As an initial matter, none of O’Neil, Cordier et al., or Carns disclose or suggest any structure related to the technical problem of the impact of birds upon mobile flaps. Indeed, none of the cited art discusses structure adapted to withstand impact loading, such as from bird strikes or the like. Additionally, neither Cordier et al. nor Carns are

directed to a leading edge for mobile flaps for a main wing of an aircraft, but are instead related to the structure of such a main wing without any mobile flaps. Thus, the alleged combination is improper because one of ordinary skill in the art would not look to combine the leading edge structure of O'Neil with the fixed main wing structure of Cordier et al. and Carns that do not have any mobile flaps.

Further, as admitted by the Examiner on page 3 of the Office action, O'Neil "does not teach a single wall in-between each rib anchored from top to bottom." Similarly, Carns does not teach a single rigid bird trajectory-deflecting wall. The Examiner alleges that Cordier et al. "teaches a single wall (shown in Figure 1) in-between each consecutive rib (Figure 1) and attached to the upper and lower trailing skin." Respectfully, the Examiner is in error. Cordier et al. does not provide a single rigid wall between two directly consecutive ribs, but instead provides a plurality of walls. See Figure 1. Thus, none of O'Neil, Cordier et al., or Carns, either alone or in combination, disclose or suggest a single rigid bird trajectory-deflecting wall.

Additionally, none of these references teach or suggest a single rigid bird trajectory-deflecting wall (42) anchored to both of the aerodynamic skin (18) and the rear skin (28), where the aerodynamic skin (18) and the rear skin (28) are independent elements. For example, as shown in Figures 2 and 3 of the instant application, the rigid wall (42) has a front lower edge (43) slightly curved inwards to the flap, and anchored to the lower surface portion (20) of the aerodynamic skin (18), while a rear upper edge (45) is anchored to the rear skin (28), for example by being riveted or bolted, in proximity to the trailing edge (22a) of the upper surface portion (22). With an arrangement of this kind, the deflecting wall (42) forms with the lower surface portion (20) and the skin (28) a box-type structure (44) that confers excellent flexural and torsional strength characteristics.

Neither O'Neil nor Cordier et al. teaches or suggests a single rigid bird trajectory-deflecting wall anchored independently to both of an aerodynamic skin (18) and to a rear skin. Carns teaches elements (14, 15) forming struts linking the interior surface of the intrado and the interior surface of the extrado of the profile, but Carns does not teach or suggest the possibility of replacing said struts (14, 15) by walls.

Furthermore, as expressly admitted by the Examiner on page 3 of the Office action, neither O'Neil nor Cordier et al. "teach the walls to be less than a 45° angle with the leading edge longitudinal direction." The Examiner alleges that Carns teaches walls/struts to be less than a 45° angle. Respectfully, the Examiner is in error. Carns does not teach or suggest that "said rigid deflecting wall (42) forms with a geometric chord (26) of the flap an angle (α_1) with a value of less than 45°." As an initial matter, the specification of Carns is silent and does not teach or suggest any angle for the struts (14, 15), and the disclosure gives no indication that the drawings were drawn to scale. Instead, Carns merely shows a poorly drawn perspective, cross-sectional view of an aerofoil formed of a series of strips (10) with struts (14, 15) arranged within the aerofoil between the series of strips (10). It is difficult, at best, to determine from such a poorly drawn perspective view the geometric chord of the aerofoil, let alone an angle of any struts (14, 15) relative thereto. The struts (14, 15) appear to be arranged at intersecting joints to support the assembly of the series of strips (10).

Moreover, "[w]hen the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value... [I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue." See MPEP 2125. Thus, it is improper for the Examiner to state that "Carns teaches wall/struts to be less than a 45° angle" to support a rejection under 35 USC 103(a).

Finally, it is respectfully submitted that Carns provides a clear *teaching away* that would *render the prior art reference being modified unsatisfactory for its intended purpose and change the principle of operation of the prior art reference*. See MPEP 2141.02, 2143.01, and 2145. Indeed, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Specifically, as detailed above, Carns teaches that the use of the struts (14, 15) is sufficient for conferring the expected rigidity to the aerofoil. Thus, "spars are not necessary, neither are ribs as generally used in structures of this kind, because the

peculiar transverse and longitudinally tapering form of the several strips give a very stiff effect to the structure as a whole and the heavy internal frame work or bracing generally used is not necessary or desirable." (emphasis added) See page 2, lines 6-33 of Carns. Therefore, Carns provides a clear *teaching away* (i.e., spars not necessary, internal frame work or bracing generally used is not necessary or desirable) from any modifications that would add any additional bracing to the aerofoil.

Thus, no modification of O'Neil and/or Cordier et al. can provide the requirements of claim 1 without *rendering Carns unsatisfactory for its intended purpose and changing its principles of operation*. Accordingly, because the Examiner expressly admitted that neither O'Neil nor Cordier et al. "teach the walls to be less than a 45° angle with the leading edge longitudinal direction," and because Carns cannot be properly combined therewith to support a rejection under 35 USC 103(a), the subject application is not rendered obvious in view of O'Neil and/or Cordier et al. in view of Carns by way of any proposed modifications thereof.

For the above-noted reasons, neither O'Neil nor Cordier et al. nor Carns, either alone or in combination, discloses or suggests the structure of independent claim 1 as is required by law to support a rejection under 35 USC 103. Indeed, for the numerous reasons listed above, it is improper to combine Carns with either of O'Neil and/or Cordier et al. to support the rejection. Further, claims 2-8 are directly or indirectly dependent upon independent claim 1. Accordingly, all of claims 1-8 are believed to be in condition for allowance.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, Order No. BRV-40949.

Respectfully submitted,
PEARNE & GORDON LLP

By: /Bryan M. Gallo/
Bryan M. Gallo, Reg. No. 59,814

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700

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